

Product Datasheet

CNX-1351

Catalog No. **BP-02123** · CAS **1276105-89-5** · Form **free base** · Physical state **solid** · Color **white to yellow** · Version **1.0** · Revision **2026-09-02**

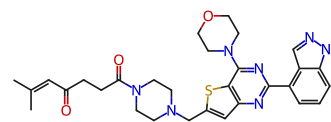
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Target PI3K	Research area Cancer
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Molecular formula **C₃₀H₃₅N₇O₃S**

Molecular weight **573.7090**

STRUCTURE



DESCRIPTION

CNX-1351 is a potent and isoform-selective targeted covalent PI3K α inhibitor with IC₅₀ of 6.8 nM.

BIOLOGICAL ACTIVITY

In Vitro

CNX-1351 is able to potently (EC₅₀<100 nM) and specifically inhibit signaling in PI3K α -dependent cancer cell lines, and this leads to a potent antiproliferative effect (GI₅₀<100 nM). CNX-1351 inhibits PI3K signaling in SKOV3 cells, with potency (EC₅₀ of 10-100 nM) similar to that of the pan-PI3K inhibitor. To investigate the functional consequence of inhibiting PI3K α in cells, two cell lines with different PIK3CA activating mutations, SKOV3 ovarian cancer cells (H1047R) and MCF-7 breast cancer cells (E545K), are treated with CNX-1351 and growth is monitored. Both PIK3CA-driven cell lines are growth inhibited by exposure to CNX-1351 for 96 h (GI₅₀ of 78 and 55 nM, respectively).

In Vivo

CNX-1351 inhibits p-AktSer473 in mouse spleens and bonds to PI3K α in vivo. CNX-1351 is delivered into the intraperitoneal cavity of nude mice at 100 mg/kg once a day for 5 consecutive days (n=3 mice per group). Spleens are harvested from the mice at the indicated times after the last dose (1-24 h) and interrogated by immunoblot for P-AktSer473 or for PI3K α occupancy. Inhibition of PI3K signaling is detected as a decrease in P-AktSer473 at 1 and 4 h after last dose.

SOLUBILITY

Soluble in DMSO, >50mg/mL

REFERENCES

[1]. Nacht M, et al. Discovery of a potent and isoform-selective targeted covalent inhibitor of the lipid kinase PI3K α . J Med Chem. 2013 Feb 14;56(3):712-21.

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Lot CoA and SDS are separate documents.